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ABSTRACT

While an increasing number of clinical reports and descriptive studies have documented stress-related dysfunction in family caregivers of older adults with chronic dementia, little is known about specific factors that place members at risk for negative outcomes. This study examined the relative effects of psychological and social characteristics on well-being in spousal caregivers of older adults with chronic dementia. Fifty-one spouses completed questionnaires assessing dementia severity, distress in appraisal of dementia symptoms, perceived support from family and peers, reliance on specific coping strategies, and psychological well-being. The results of the path analysis showed that gender, appraisal of dementia symptoms, perceived peer support, and three types of coping strategies (problem-solving, positive focus, and wishful thinking) were significant predictors of well-being. Overall, the predictor variables accounted for 60.3 percent of the variance in psychological well-being. The findings document the salience of these characteristics in further study of caregiver functioning. More generally, results provide support for multi-dimensional models of stress, coping, and adaptation. The findings have implications for clinical intervention. (Author/NB)

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Stress, Appraisal, and Coping In Spouses of Demented Elderly: Predictors of Psychological Well-Being

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Stress, Appraisal, and Coping

In Spouses of Demented Elderly:

Predictors of Psychological Well-Being

Abstract

This study examined the relative effects of psychological and social characteristics on well-being in spousal caregivers of older adults with chronic dementia. Fifty-one spouses completed questionnaires assessing dementia severity, distress in appraisal of dementia symptoms, perceived support from family and peers, reliance on specific coping strategies, and psychological well-being. The results of the path analysis show that gender, appraisal of dementia symptoms, perceived peer support, and three types of coping strategies (problem-solving, positive focus, and wishful thinking) are significant predictors of well-being. Overall, the predictor variables accounted for 60.3 per cent of the variance in psychological well-being. The findings document the salience of these characteristics in further study of caregiver functioning. More generally, results provide support for multi-dimensional models of stress, coping, and adaptation. The implications of findings for clinical intervention are summarized.

While an increasing number of clinical reports and descriptive studies have documented stress-related dysfunction in family caregivers of older adults with chronic dementia, little is known about specific factors that place members at risk for negative outcomes. Reviews of work to date show that some family caregivers develop discrete signs of physical or mental distress, notably depression, anxiety, and demoralization, while others appear to manage the demands of the illness without marked signs of difficulty (for reviews see Cohler, Borden, Groves & Lazarus, in press; Horowitz, 1985; Niederehe & Fruge, 1985). At present, however, we know relatively little about specific determinants of stress, coping, and adaptation in the context of the illness experience.

Attempts to specify predictors of burden have focused on illness characteristics (e.g., Grad & Sainsbury, 1968; Isaacs, 1971; Noelker & Poulshock, 1982; Robinson, 1983; Sanford, 1975), caregiving tasks (e.g., Gurland, Dean, Gurland & Cook, 1978; Moss & Lawton, 1980), disruptions in social functioning (e.g., Frankfather, Smith & Caro, 1981; Fengler & Goodrich, 1979); family dynamics (e.g., Niederehe & Fruge, 1985), and socio-demographic characteristics such as gender, age, marital status, social class, and race (e.g., Cicirelli, 1980; Noelker & Poulshock, 1982; Robinson, 1983).

Much of the work to date, drawing on biological models of stress, has been based on the assumption that family caregivers are passive recipients of demands associated with the illness

experience. In general, however, there has been little correlation between objective stressor characteristics and caregiver outcomes (Fiore, Becker & Coppel, 1983; Haley, Levine, Brown & Bartolucci, 1987; Zarit, Reever, Bach-Peterson, 1980). Findings fail to provide clear or consistent information about the antecedents, mediators, and consequences of stress-related dysfunction in family members.

Increasingly, researchers have recognized the significance of individual differences among family members in determining levels of functioning and, in turn, have realized the need to develop multivariate models of caregiver adaptation (George & Gwyther, 1986). Given the increasing emphasis on cognitive appraisal and coping experience in theoretical discussion of stress and adaptation (Lazarus & Folkman, 1984), workers have begun to examine caregiver appraisals of stressors, perceptions of social relationships, and coping strategies in the context of the illness experience. While few studies of adaptive processes have been published thus far, recent findings provide support for the salience of cognitive appraisals and coping processes in determining levels of functioning and well-being.

Caregivers' appraisals of stressors and levels of social support were significantly correlated with depression and burden in findings reported by Coppel, Burton, Becker, and Fiore (1985). Haley, Levine, Brown and Bartolucci (1987) found that caregivers' subjective appraisals of their patients' problems were better predictors of depression than were specific characteristics of stressor conditions. Reliance on such coping strategies as

information-seeking, problem-solving, and affective regulation was related to higher self-reported health, and individual differences social support and activity were significantly correlated with greater life satisfaction.

This study, seeking to extend work in this area of inquiry, examined the relative importance of a series of psychological and social characteristics in determining levels of functioning among spousal caregivers. The objectives were (1) to distinguish the relationships among five classes of characteristics believed to exert varying degrees of influence in caregiver functioning, specified as dementia severity, gender, distress in appraisal of illness characteristics, perception of family and peer support, and coping strategies; and (2) to evaluate the effects of these characteristics on levels of psychological well-being. In doing so, the study sought to provide a base for development of multi-dimensional models of caregiver functioning.

The sample was limited to spousal caregivers for three reasons. First, much of the work on family caregiving has focused on adult children, in spite of reports that elderly spouses are most likely to assume caregiving responsibilities (Johnson, 1983). Second, reports suggest that spouses are particularly vulnerable to the strains of the illness experience, in view of diminished capacities associated with normal aging, worries about the course of the illness, and concerns about transition to widowhood (Groves, 1988). Further, studies show that many spousal caregivers are themselves in poor health

(Cantor, 1983; Fengler & Goodrich, 1979). Third, the value of much work to date has been limited by heterogeneous samples. Spouses, adult children, and other relatives have been included in analysis of data, making it impossible to distinguish variance associated with relationship status (Borden, 1987).

Variables were selected for study on the basis of empirical study of chronic illness and caregiver functioning as well as theoretical work in the field of stress and coping. A model of adaptation, based on the stress and coping model of Lazarus and Folkman (1984), distinguished antecedent characteristics, mediating processes, and caregiver outcomes as shown in Figure 1.

Antecedent Characteristics

Dementia severity. One of the earliest lines of study, based largely on life events research, investigated the relationship between illness characteristics and caregiver burden (e.g., Hoenig & Hamilton, 1966; Grad & Sainsbury, 1968; Rabins, Mace & Lucas, 1982; Sainsbury & Grad, 1970; Sanford, 1975). Discussions emphasized consequences of patient impairment that called for a response or intervention from the caregiver. The implicit assumption, consistent with biological stress models (Selye, 1956), was that caregiver stress follows from objective, external demands. While objective measures of physical health status have failed to document significant relationships between illness severity and caregiver distress, there is evidence of a modest association between dementia-related behavioral disturbance and caregiver strain in some studies (Johnson & Johnson, 1983; Noelker & Poulshock, 1982; Poulshock & Deimling,

1984; Rabins, Mace & Lucas, 1982; Robinson, 1983; Wilder, Teresi, & Bennett, 1983). Accordingly, illness severity, as determined by frequency of memory and behavioral problems, was selected as a stressor variable. Given the role of cognitive appraisal in the stress and coping model, it was expected that caregiver distress in perception of illness characteristics would exert a greater effect on caregiver well-being than would frequency of memory and behavior problems per se.

Caregiver gender. Gender appears to be one of the most important factors determining selection of the primary caregiver, with women most frequently assuming responsibilities as spouses, daughters, or daughters-in-law (Brody, 1981, 1985; Horowitz, 1985; Johnson & Catalano, 1983). To date, however, there has been relatively little study of the effects of gender on caregiver functioning. One group of reports, consistent with general findings on morale and gender in later life, suggests that women experience greater degrees of psychological distress than do men (e.g., Cantor, 1983; Cicirelli, 1981; Fitting, Rabins, Lucas & Eastham, 1986; Johnson, 1983; Noelker & Poulshock, 1982). Other workers, however, have failed to document significant sex differences in caregiver distress (Groves, 1988). In a longitudinal study, Zarit, Todd, and Zarit (1986) found that women initially reported more distress than did men, although no significant differences were found at the end of a two-year follow-up. Gender was included in the model as an antecedent characteristic in order to determine its relationship to mediating processes (social support and coping strategies) and

psychological well-being.

Mediating Processes

Perceived social support. Increasingly, social support is believed to buffer potentially harmful effects of stressors and strengthen coping capacity (see reviews by Cohen & Syme, 1985; Gottlieb, 1983). Consistent with formulations in the theoretical literature, social support has been correlated with lower levels of caregiver stress in several studies (Noelker & Poulshock, 1982; Rathbone-McCuan, 1976; Zarit, Reever & Bach-Peterson, 1980). In accordance with the stress model, it was expected that perceived support from family and peers would mediate the effects of illness severity on distress in appraisal of dementia characteristics.

Appraisal of dementia characteristics. Recent work (Haley et al., 1987) points to the importance of appraisal processes in determining adaptational outcomes. In the context of the stress model, dementia symptoms may be understood as stressors that are appraised in different ways, depending on the meaning and consequences of the impairment for the caregiver. Differences in appraisal of memory and behavioral problems were hypothesized to lead to varying degrees of distress, which, in turn, result in concordant levels of functioning. It was expected that greater degrees of perceived support from family members and peers would result in lower levels of distress in appraisal of illness characteristics.

Coping strategies. Coping strategies have been conceptualized as problem-focused, when the goal is to change

stressor conditions, and as emotion-focused, when the task is to regulate distressing affect precipitated by stressor conditions (Billings & Moos, 1981; Lazarus & Folkman, 1984). Although studies have shown that persons use both forms of coping in every type of stressful encounter (Folkman & Lazarus, 1980), there is some evidence that the relative frequency of strategies in each area is determined in part by the degree of threat in perception of stressors. On the basis of theoretical discussion and empirical study (for review see Lazarus & Folkman, 1984), it was expected that spouses reporting greater degrees of distress in appraisal of illness characteristics would rely more frequently on emotion-focused coping strategies (detachment, wishful thinking, and positive focus). Such types of coping are hypothesized to be most effective in regulating distressing affect. Spouses reporting lower levels of distress, on the other hand, were expected to rely more frequently on problem-focused strategies, on the assumption that lower levels of arousal allow caregivers to attend to illness-related tasks and problems.

Greater reliance on emotion-focused strategies was expected to result in lower levels of well-being for two reasons. First, failure to respond to demands associated with the illness experience is likely to result in a 'pile-up' of unresolved problems, thereby increasing the overall level of strain. Second, such spouses may experience a diminished sense of efficacy, given their inability to master difficulties, and subsequently develop depression and anxiety (Bandura, 1979). Overall, reliance on problem-focused as well as emotion-focused

strategies was expected to correlate with higher degrees of psychological well-being, on the assumption that effective coping acknowledges the possibilties as well as the limitations for action in the context of the illness experience.

Outcome Criterion

Psychological well-being. The concept of psychological well-being has emerged as an important indicator of adaptational outcome in the gerontological literature (for reviews see George & Bearon, 1980; Larson, 1978; Veit & Ware, 1983). The construct addresses multiple aspects of functioning that pathology-based measures generally fail to consider, including morale, subjective emotional states, social functioning, and life satisfaction. Moreover, assessment of the characteristic relies on subjective perception of life experience as opposed to objective assessment of symptoms. As such, it is consistent with the increasing importance placed on subjective experience in stress and coping theory. Finally, the construct examines affective reactions to life experience along a continuum; accordingly, positive as well as negative affect is considered in assessment of adaptational outcome. Such a range allows workers to examine degrees of well-being, thereby shifting the focus from stress and pathology to adjustment and adaptation.

To summarize, the research hypotheses held that levels of psychological well-being would be determined in varying degrees by perception of social support, appraisal of illness characteristics, and types of coping strategies. Caregiver outcomes, in turn, were hypothesized to influence caregiver

appraisals and coping strategies over time.

Method

Subjects

Spouses of older adults with chronic dementia were recruited by referral from health care providers in hospital-based clinics and social service agencies. Persons were included in the study if their partner had been diagnosed as having a chronic dementing illness for at least one year. Spouses met eligibility criteria if they provided care in the home setting or assumed responsibility for management of care in an institutional setting and had contact with their partner at least four times weekly. Spouses were excluded if they were receiving psychotherapy or taking psychotrophic medications.

Procedure

Subjects completed five self-report instruments and a semi-structured interview. About 2-1/2 hours was needed to complete the evaluation. Interviews were conducted by the investigator and a clinical social worker from the Illinois State Psychiatric Institute. The majority of the assessments were in the subjects' homes.

Measures

Dementia severity, as determined by degree of memory and behavioral problems, was assessed by the Memory and Behavior Problems Checklist, Part A (Zarit & Zarit, 1983). This 30-item scale, administered by interview, assesses the frequency of specific memory and behavioral problems associated with chronic dementia, e.g., wandering, repetitive questioning,

hallucinations. Scores were based on the frequency of memory and behavioral problems that the caregiver reported the patient had shown over the last month, and could range from 0 to 120.

Distress in appraisal of illness characteristics was assessed by the Memory and Behavior Problems Checklist, Part B (Zarit & Zarit, 1983). This 30-item scale, administered by interview, measures the extent to which caregivers are distressed by specific symptoms. Ratings are made on a five-point scale, ranging from "not at all" (0) to "extremely." Scores were based on the total degree of distress, and could range from 0 to 120.

Perceived support from family and peers was assessed by the Perceived Social Support Scale (Procidano & Heller, 1983). The questionnaire consists of two related but independent scales of 40 items which measure perceived support from family and peers. Subjects answer "yes," "no," or "Don't know" in response to declarative statements describing feelings and experiences in relationships with family members and friends. Scores were based on the total amount of perceived support from family and friends, and could range from 0 to 20 on each part.

Coping strategies were assessed by the Ways of Coping Checklist (Revised) (Folkman & Lazarus, 1980). This 66-item scale describes a range of thoughts, feelings, and actions that persons use to deal with taxing events, in this instance the fact of the spouse's dementing illness. Eight categories of coping strategies are assessed: problem-focused, wishful thinking, detachment, seeking support, positive focus, self-blame, tension-reduction, and keeping to self. In this study four of the

categories were used in the path analysis: problem-focused, detachment, wishful thinking, and positive focus. Ratings are made on a four-point scale, ranging from 'not used' (0) to 'used a great deal' (3). Scores were obtained by summing the ratings in each category.

Psychological well-being was assessed by the Mental Health Index (Rand Corporation & Ware, 1979). This 43-item scale measures well-being by assessment of feelings and behaviors that occurred during the last month. Scores on each of the subscales (depression, anxiety, behavioral and emotional control, and emotional ties) were summed to provide an overall well-being score. Scores could range from 0 to 241.

Data Analysis

The hypothesized model of adaptation was tested by path analysis. This procedure distinguishes direct, indirect, and joint or spurious effects of predictor characteristics (Alwin & Hauser, 1975). All effects in the model are estimated by ordinary least squares regression. Whereas direct effects are unmediated, indirect effects occur when the effect of one characteristic is mediated by a third characteristic. Spurious or joint effects refer to the proportion of zero-order correlation between two characteristics due to the correlation of the predictor variable with preceding characteristics in the model or to the common influence of factors not represented in the model.

Results

Description of Sample

The sample consisted of 51 spouses of older adults with chronic dementia. The majority of the sample, 65%, were women. The mean age of the subjects was 70.6 years (S.D. = 8.9 years), ranging from 36 to 89 years of age. Seventy-eight per cent of the subjects lived with their spouses, while 22% provided care to a partner residing in a nursing facility. Analysis of data on the basis of care setting showed no significant differences among the characteristics selected for study; accordingly, the groups were combined for purposes of the path analysis. Forty-nine of the subjects' partners had been diagnosed as having Alzheimer's Disease; two others were diagnosed as having other dementing conditions (Pick's Disease and Normal Pressure Hydrocephalus). The average length of time since diagnosis of dementia was 4.0 years (S.D. = 2.3 years, ranging from 1 to 7 years. Social class was categorized on the basis of occupational status, as described in Hollingshead's Four Factor Index of Social Class (Hollingshead, 1975). Table 1 summarizes descriptive information about the sample.

Results of Path Analysis

The results of the path analysis are shown in Table 2 and Figure 2. The zero-order correlations (column 2 in Table 2) are the Pearson correlation coefficients between each predictor and the dependent variable listed in column 1. Total effects (column 11) refer to the sum of the direct (column 3) and

indirect (columns 4-10) effects of each predictor variable on each criterion variable listed in column 1. The noncausal covariations listed in column 12, which include spurious and joint effects, are the difference between the total associations and the total effects.

The results of the path analysis suggest that variance in caregiver well-being can be explained, in large measure, by individual differences in appraisal of illness characteristics, perception of social support, and reliance on certain types of coping strategies. Gender emerges as a primary factor in caregiver distress as well.

It will be helpful to review major findings before we examine the model of adaptation that emerges from the analysis.

Dementia severity, as assessed by frequency of memory and behavioral problems, had a direct positive effect on level of caregiver distress in appraisal of illness characteristics (beta = .39, p = .01). That is, greater frequency of memory and behavioral problems were associated with greater degrees of distress in perception of dementia symptoms.

Degree of caregiver distress in appraisal of illness characteristics, in turn, had a direct negative effect on level of caregiver well-being (beta = -.28, p = <.01). That is, greater degrees of distress predicted lower levels of well-being.

Degree of perceived support from peers had a direct positive effect on problem-solving efforts (beta = .36, p = <.05) and a direct negative effect on wishful thinking as coping strategies (beta = -.44, p = <.001). Further, peer support had a direct

positive effect on well-being (beta = .29, p = <.05), such that greater levels of support predicted higher levels of well-being.

Use of problem-solving efforts in coping had an indirect positive effect on caregiver well-being that was mediated by reliance on positive focus as a coping strategy (beta = .32, p = <.05). That is, use of problem-solving efforts predicted greater levels of well-being provided that positive focus was also employed as a coping strategy. Additionally, reliance on positive focus in itself emerged as a significant predictor of well-being. Greater use of strategies in this category predicted higher levels of well-being (beta = .45, p = <.001).

Finally, caregiver gender had a direct effect on level of well-being, such that men reported higher levels than did women (beta = .46, p = <.001). Gender was not significantly related to perceived levels of social support, caregiver distress, or reliance on specific coping strategies.

Overall, the predictor variables accounted for 60.3 per cent of the total variance in psychological well-being [F (9,49) = 6.93, p = .01]. Gender and positive focus in coping accounted for the greatest proportion of variance, followed by perceived peer support and distress in appraisal of illness characteristics.

Discussion

The results of the path analysis provide partial support for the hypothesized model of adaptation. The revised version is shown in Figure 2.

As expected, caregiver distress in appraisal of illness characteristics was more predictive of adaptational outcome than

severity of dementia, per se. Such findings are consistent with recent reports that note the weak relationship between objective characteristics of illness characteristics and caregiver outcomes (George & Gwyther, 1986; Haley et al., 1987; Pagel et al., 1985). In the context of the path model, we may hypothesize that differences in perception of symptoms lead to varying degrees of distress, which, in turn, result in corresponding levels of well-being. The findings are consistent with the implications of the stress and coping model, in that appraisal of stressor conditions is more predictive of adaptational outcome than objective characteristics of the stressor condition.

Perceived peer support emerged as an important factor in determining specific coping strategies as well as levels of psychological well-being. As the revised model shows, peer support had a direct positive effect on use of problem-solving strategies and a direct negative effect on wishful thinking in coping efforts. Further, it had a direct positive effect on psychological well-being. Although level of perceived family support was positively associated with level of perceived peer support, this finding is treated as a non-causal correlation in the model on the assumption that exogenous factors influence perception of support in each area.

Results suggest that perception of peer support facilitates use of active, problem-focused coping strategies and minimizes reliance on wishful thinking, generally regarded as a less effective form of coping in psychoanalytic discussions. These findings are in accord with outcomes of previous research on

social support, coping, and health. Lack of support is associated with reliance on dysfunctional, emotion-focused strategies (e.g., ignoring, avoidance, and resignation) and negative outcomes (Billings & Moos, 1982; Menaghan, 1982). In contrast, higher levels of support are associated with use of active, problem-solving strategies (Antonucci & Depner, 1982; Belle, 1987; Cobb, 1976).

While social support did not mediate distress in appraisal of illness characteristics, contrary to expectations, peer support was directly related to levels of well-being. Such findings are consistent with study of morale and social support in later life. There is growing consensus that interaction with friends helps to maintain morale, while family relations appear to have relatively little impact on subjective well-being (Gottlieb, 1983; Lowenthal & Robinson, 1976; Weiss, 1974; Wood & Robertson, 1978). Explanations of such findings focus on differences in the nature of family and peer relations. Family relationships tend to be governed by a sense of obligation and constrained by social and cultural norms (Gottlieb, 1983), whereas peer relations are characterized by voluntarism and reciprocity; the psychological consequences of dependency, accordingly, are minimized by a more equal ability to exchange assistance (Bankoff, 1983).

The findings show, then, that social support plays an important but complex role in adaptational outcomes. The results suggest that perceived support buffers potentially negative effects of stressors by reducing threat in appraisal of events

and by facilitating coping efforts. In the context of the path model, perceived support is understood as a personal resource that works to determine coping strategies as well as levels of well-being.

Although theoretical discussion and empirical study have suggested that affect is a determining factor in reliance on types of coping strategies, level of caregiver distress in appraisal of dementia symptoms was not correlated with reliance on problem-focused or emotion-focused strategies. Peer support was the only variable related to selection of coping strategies. One possibility, consistent with the stress model, is that peer support reduces threat in appraisal of stressors generally and thereby facilitates use active, problem-focused coping efforts.

Psychoanalytically-informed discussion of coping and adaptation has tended to emphasize the salutary effects of problem-focused strategies and the deleterious consequences of emotion-focused efforts (Menninger, 1954; Vaillant, 1977; see also findings reported by Billings & Moos, 1981; Pearlin & Schooler, 1978). In general, however, the findings of this study support recent social-psychological formulations, which hold that coping outcomes are best understood in the context of the stressor situation. The results of the path analysis document the importance of problem-focused and emotion-focused coping in efforts to deal with the stressors of the illness experience. Reliance on problem-focused coping strategies predicted higher levels of well-being provided that positive focus was also used as a coping resource. Such strategies may be mutually

facilitative in that reduction of distress helps caregivers to carry out illness-related tasks. The findings imply that adaptive coping requires assessment of potential for action in specific contexts.

While gender was not associated with marked differences in caregiver distress, perceived support, or reliance on the four coping strategies assessed, it was significantly related to level of psychological well-being. Overall, men reported higher levels of well-being than did women. This relationship is consistent with results from a series of cross-sectional studies described earlier, and it supports findings in general study of gender and adaptational outcome (Barnett, Biener & Baruch, 1987; Boyd & Weissman, 1981; Radloff, 1985; Weissman & Klerman, 1977).

One line of explanation, proposed by Fitting et al. (1986), consistent with studies by Lowenthal, Thurnher, Chiriboga and associates (1975), Neugarten & Gutmann (1968), and Gutmann (1987), holds that developmental shifts in later life are influential in determining differences in well-being. In the context of this work men are believed to shift from instrumental roles and become more receptive, while women turn from expressive roles and become more active with advancing age. Many women function as mothers and homemakers in earlier stages of adulthood but assume roles outside the home once they are no longer responsible for children. Women are thereby released from stereotyped definitions of parental roles and are able to pursue their own needs (Cohler & Gruenbaum, 1981). Return to caretaking responsibilities in later life may necessitate disengagement from

professional or social activities and lead to depression. Men, on the other hand, generally disengage from occupational roles in later life and may find a sense of meaning and purpose in the caregiver role.

An alternate explanation suggests that differential rates of depression, anxiety, and well-being are best understood as artifacts of response bias. The assumption is that men and women experience comparable levels of distress but that men under-report symptomatology because social norms discourage emotional expressiveness and self-disclosure. However, clinical interviews with subjects (Borden, 1988) tended to confirm differential levels of depression and anxiety reported in the standardized assessments. Further consideration of socialization processes and developmental changes in later life may help to identify determinants of adaptational outcome.

Research Issues

We should exercise caution in generalizing findings to the population of spousal caregivers. As in previous study samples, urban, middle-class caregivers were over-represented and racial and ethnic minorities were under-represented. While the subjects were not directly self-selected, nearly a quarter were indirectly self-selected because they were drawn from participants in self-help support groups. Although analysis did not reveal significant differences between group participants and other subjects, it is possible that such caregivers were more or less distressed than those not involved in support groups.

The size of the sample is relatively small, and the number of independent variables examined in the analysis limits statistical power and increases the likelihood of Type II (false negative) error. Accordingly, trends that might reach statistical significance in larger samples may not have attained significance in this sample. Only the strongest trends in the data are reported.

While the path analysis procedure distinguishes patterns of relationship among specific characteristics, it does not allow us to make conclusive statements about causality and the direction of effect underlying the observed associations. For example, while perceived peer support was found to be a significant predictor of well-being, one could argue that the opposite causal relationship between these variables is equally plausible. Cause and effect relationships cannot be determined on the basis of cross-sectional data.

Finally, the outcome criterion used in the study, psychological well-being, is only one indicator of functioning. Adaptational outcome is multi-dimensional construct, and phenomena in other areas, such as physical health status and social functioning, were not assessed in the path model. The use of multiple and disparate indicators of adaptation provides more complete views of the relevance of social and psychological factors in adjustment.

Although the variables investigated in the path model accounted for a substantial proportion of the variance in well-being, the study did not examine the relative impact of

additional factors that are likely to influence levels of functioning. For example, the importance of specific caregiving responsibilities, setting of patient care, and formal support in caregiver functioning remains unclear. Moreover, role shifts imposed by impairment of the ill spouse and assumption of caregiving responsibilities would appear to constitute major sources of strain. Content analysis of clinical interview data (Borden, 1988) points to the importance of personal beliefs, values, and commitments in determining patterns of meaning in the illness experience. Finally, little is known about ways in which duration of illness influences caregiver functioning. The potential importance of factors excluded from the model must be considered in evaluating the results of this study.

In the context of psychosocial intervention, the results of this investigation emphasize the need to assess objective phenomena (e.g., illness severity) as well as caregivers' subjective perceptions and meanings of illness characteristics, appraisal of social relationships, and reliance on coping strategies. Assessment should specify conditions under which the caregiver experiences strain and determine whether difficulties are located primarily in the appraisal process (e.g., the caregiver interprets dementia-related behavioral disturbance as willful, intentional acts) or in the coping process (e.g., the caregiver has failed to develop adequate problem-solving skills). Findings suggest that treatment efforts should help caregivers to reduce distress in appraisal of illness characteristics, facilitate development of adaptive coping strategies, and promote

use of social networks in efforts to mobilize sources of emotional support.

Some of the results of this study support the findings of previous investigations, and reviews of work to date show consistent data about caregiver burden in a number of areas (Cohler et al., in press). Other issues, however, remain equivocal and need continued study. Cross-sectional investigations have suggested that caregivers experience different stressors, needs, and reactions at various stages of the illness experience. However, prospective studies are needed to document psychological and social changes from the point of diagnosis through the death of the patient. Likewise, longitudinal study is necessary to determine the relationships between illness characteristics, cognitive appraisals, family and peer support, coping strategies, and caregiver functioning. The effects of gender and social roles and norms emerge as important areas of study as well.

Research efforts based on theoretical models of stress will become more frequent as workers realize the heuristic value of such frameworks in formulation of questions and hypotheses. Continued research, informed by theoretical work, will help us to refine our understanding of salient issues in caregiver functioning. In doing so, we will move beyond descriptive levels of study and begin to develop explanatory models of coping and adaptation.

Conclusion

The study was developed on the assumption that caregiver well-being is a function of multiple psychological and social

factors that assume varying degrees of importance in determining adaptational outcomes. Individual differences in appraial of illness characteristics, perceived peer support, and reliance on certain coping strategies accounted for a relatively large proportion of the variance in psychological well-being. Gender was significantly related to adaptational outcome as well. The results of the study thereby confirm the salience of these characteristics in further study of caregiver functioning. More generally, the findings provide support for multi-dimensional models of stress, coping, and adaptation, and demonstrate the value of such frameworks in development of further research in this area.

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TABLE 1. Demographic Characteristics of Sample

Variable		Per cent	N	Mean	SD
Total		100	51		
Sex:	Female	56	33		
	Male	35	18		
Race:	White	78	40		
	Black	20	10		
	Hispanic	2	1		
Age:				70.6	
Yrs illness duration				4.0	8.9
Setting:	home	78	40		
	ext care	22	11		
Religion					
	Protestant	68	35		
	Catholic	20	10		
	Jewish	12	6		
SES	Class I	4	2		
	Class II	10	5		
	Class III	18	9		
	Class IV	55	26		
	Class V	14	9		

TABLE 2. Decomposition of Effects from Path Analysis

Effect	Zero Order r	Direct	Indirect via PSS1	Indirect via PSS2	Indirect via MBP2	Indirect via WC1	Indirect via WC2	Indirect via WC3	Indirect via WC5	TOTAL	NON CAUSAL COVAR	R^2 F df p
On Perceived Family Support												.092
Of MBP1	-.19	-.19								-.19	.00	1.06
Of Sex	-.09	.09								-.09	.00	2,48
												NS
On Perceived Peer Support												.301
Of MBP1	.02	.10	-.09							.01	.01	6.76
Of Sex	-.26	-.21	-.04							-.25	-.01	3,47
Of PSS1	.50**	.50***								.50***	.00	<.001
On Caregiver Distress in Appraisal of Dementia Symptoms												.238
Of MBP1	.44**	.39**	.04	.00						.43**	.01	3.60
Of Sex	.08	.08	.02	-.01						.09	-.01	4,46
Of PSS1	-.30	-.24		.03						-.21	-.09	.01
Of PSS2	-.08	.05								.05	-.13	
On Problem Solving as Coping Strategy												.237
Of MBP1	.24	.18	-.04	.04	.06					.24	.00	2.79
Of Sex	-.14	-.04	-.02	.18	-.25					-.13	-.01	5,45
Of PSS1	.20	.09		.18	-.04					.23	-.03	.03
Of PSS2	.43**	.36*			.00					.36*	.07	
Of MBP2	.18	.15								.15	.03	
On Wishful Thinking as Coping Strategy												.345
Of MBP1	.29	.15	.05	-.03	.04	.07				.28*	.01	3.86
Of Sex	-.05	-.12	.02	.07	.01	-.02				-.04	-.01	6,44
Of PSS1	-.32	-.14		-.15	-.04	.05				-.29	-.04	<.01
Of PSS2	-.33	-.44***			.01	.14				-.29	-.04	
Of MBP2	.26	.06				.06				.12	.14	
Of WC1	.25	.39***								.39***	-.14	

TABLE 2, continued

Effect	Zero Order r	Direct	Indirect via PSS1	PSS2	MBP2	WC1	WC2	WC3	WC5	TOTAL	NON CAUSAL COVAR	R^2 F df p
On Detachment as Coping Strategy												.116
Of MBP1	-.03	-.10	-.03	-.01	-.02	-.03	.16			-.03	.00	8.03
Of Sex	-.08	-.04	-.02	.13	.01	-.13	-.03			-.08	.00	7,43
Of PSS1	.20	.26		.07	-.11	.11	-.14			.19	.01	.59
Of PSS2	.09	.03			.01	.05	-.12			-.03	.12	
Of MBP2	.03	.08				.02	.01			.11	-.08	
Of WC1	.16	.04					.10			.14	.02	
Of WC2	.18	.27								.27	-.09	
On Positive Focus as Coping Strategy												.628
Of MBP1	.30	.19	-.06	.04	.02	.11	-.03	.01		.28*	.02	8.86
Of Sex	-.18	-.07	.03	-.15	.02	-.03	.02	.01		-.17	-.01	8,42
Of PSS1	.25	.06		.19	-.01	.05	.03	-.03		.29*	-.04	.00
Of PSS2	.46***	.06			.00	.12	.20	-.01		.37*	.09	
Of MBP2	.10	-.03				.09	-.01	-.01		.04	.06	
Of WC1	.73**	.71****					-.08	.00		.63****	.10	
Of WC2	-.01	-.18						-.03		-.21	.20	
Of WC3	-.01	-.10								-.10	.09	
On Caregiver Well-Being												.603
Of MBP1	.09	.15	-.08	.05	-.11	.04	-.03	-.01	.09	.10	-.01	6.93
Of Sex	.28	.46***	-.04	-.10	-.02	-.01	.02	.00	-.03	.28*	.00	9,41
Of PSS1	.38**	.06		.23	.06	.02	.03	.02	.02	.44**	.06	.00
Of PSS2	.46***	.29*			.02	.07	.09	.00	.02	.45**	.01	
Of MBP2	-.23	-.28**				.03	-.01	.01	-.02	-.27*	-.05	
Of WC1	.32	-.05					-.07	.00	.32*	.20	.12	
Of WC2	-.29	-.13						.01	-.07	-.19	-.10	
Of WC3	.08	.12							-.04	.08	.00	
Of WC5	.49***	.45***								.45***	.04	

[a]The following abbreviations are used in the table:
MBP1 = severity of dementia (behavioral disturbance)
MBP2 = caregiver distress in appraisal of dementia symptoms
PSS1 = perceived family support
PSS2 = perceived peer support
WC1 = problem-solving as coping strategy
WC2 = wishful thinking as coping strategy
WC3 = detachment as coping strategy
WC5 = positive focus as coping strategy

TABLE 2, continued

* = p <.05
** = p <.01
*** = p <.001
**** = p <.0001

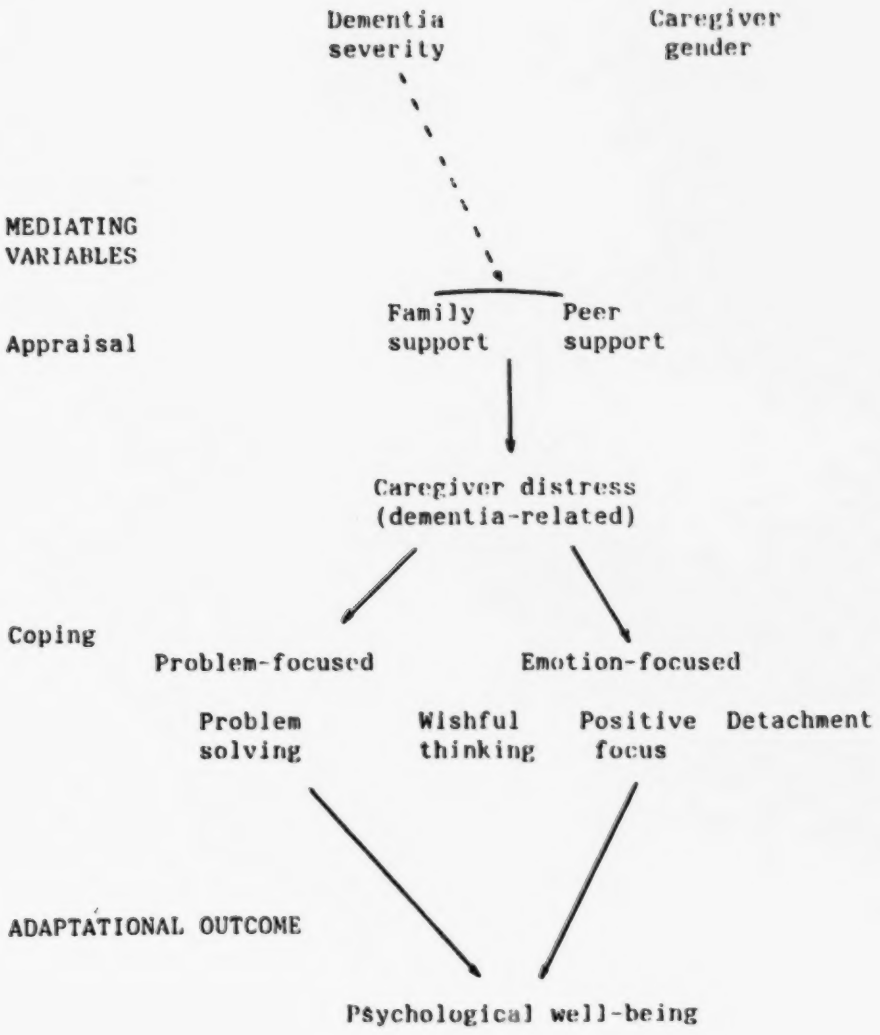

FIGURE 1. Hypothesized Model